



Launch Mission Execution Forecast

Mission: Falcon 9 Sirius XM-8

Issued: 4 Jun 2021 / 0830L (1230Z)

Valid: 6 Jun 2021 / 0025 – 0226L (0425 – 0626Z)



Forecast Discussion: Deep tropical moisture will continue to stream across Florida to end the week, as the axis of the western Atlantic ridge remains just to the north. A slower inland moving East Coast sea breeze will bring higher rain and storm chances to the Spaceport during the afternoons today and tomorrow, with the threat for late night and early morning onshore moving Atlantic showers remaining. For Saturday, showers and storms are expected to inland of the Spaceport before sunset, with lingering mid and upper level convective debris clouds around for the primary launch late night window. A few Atlantic showers and cumulus in the vicinity cannot be ruled out.

The ridge axis lifts north on Sunday as the boundary dissipates. This will deepen the southeasterly flow, bring a slightly drier airmass, and push the east coast sea breeze more quickly inland across the peninsula. Slightly lower rain chances will be on tap Sunday afternoon, leading overall better conditions into the backup launch window late Sunday night. The primary concerns will be any convective debris from earlier activity, and a small threat for cumulus associated with a stray Atlantic shower.

Launch Day	Probability of Violating Weather Constraints							
	40%	Primary Concerns: Debris Cloud Rule, Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	Isold. Showers / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	77°F / 86%	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather:	Low
24-Hour Delay	Liftoff Winds (200’):	160° 12 - 17 mph	Altocumulus	Broken	13,000	20,000	Solar Activity:	Low
	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Cloud Rule, Debris Cloud Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Temp/Humidity:	77°F / 81%	Cumulus	Scattered	3,000	9,000	Booster Recovery Weather:	Low	
Liftoff Winds (200’):	130° 10 - 15 mph	Altocumulus	Scattered	13,000	18,000	Solar Activity:	Low	
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.								
Next Forecast Will Be Issued		5 Jun 2021						